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Supramolecular "containers": Self-assembly and functionalization of thiacalix[4]arenes for recognition of amino- and dicarboxylic acids

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Abstract

New p-tert-butylthiacalix[4]arenes containing amide, tertiary amine and ammonium fragments in cone conformation were synthesized and characterized. The interaction of the p-ter--butylthiacalix[4]arenes with amino-, dicarboxylic acids and EDTA was studied by electron spectroscopy. The ability of the synthesized thiacalix[4]arenes to form supermolecules and supramolecular associates with guests was shown by dynamic light scattering. The formation of commutative and cascade supramolecular systems based on amphiphilic macrocycles was studied by UV spectroscopy and dynamic light scattering. It was shown that thiacalix[4]arene containing quaternary ammonium fragments with three methyl groups at the nitrogen form associates-"containers" containing glutamic acid as a guest.

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